

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[PRICE 6D.]

BISHOP AUCKLAND AND WEARDALE RAILWAY.

[illegible]

The opening of the Bishop Auckland and Wearside Railway is a matter of the highest importance to the interests of the Wearside district, which has hitherto been almost shut out from the markets of the country, notwithstanding the great value of the productions with which it abounds. The district is celebrated for the great amount of limestone formation at Fyfecrier, Henshaw, &c., as noted amongst farmers for its fertilizing properties. The opening of the line will, therefore, form a ready outlet for this valuable production, and thus bestow a great advantage upon the agricultural population. There is also much stone in great abundance in the district, as well as lead and ironstone; portions of copper have been found—and several proprietors of land contemplate doing considerable business in this article. All these productions may be had in great abundance, independent of coal; and, such being the case, the advantages to the district, which are sure to follow the opening of the new line, will be incalculable. Besides the collieries which have for some time been in operation, a new coal, of excellent quality, has been discovered within the short space of seven works, by T. C. Gibson, Esq., in a field called Woodfield, leased from G. H. Wilkinson, Esq., and situated at the present terminus of the railway at Crook—a great quantity of which is now being taken on this occasion, and shipped at Middlesbrough.

The directors and visitors returned to Darlington, where they arrived at half-past five, when about eighty gentlemen sat down to an elegant entertainment provided by the directors. G. H. Wilkinson, Esq., took the chair, and H. P. Smith, Esq. (of Halifax), the vice-chair, and, after the removal of the cloth, as the usual preliminary toast had been drunk, the chairman, in proposing "Prosperity to the Bishop Auckland and Weardale Railway," said that, after the lapse of six years, they had succeeded in opening the first length of time might appear long to the uninitiated, but when the difficulties they had had to encounter, were known, the surprise would vanish; they had encountered difficulties, engineering difficulties of no mean order, and difficulties which could not be considered steel, but the hardships from families they were now far ever buried in oblivion. In the first place, they had to work their way under difficulties, having only, what is termed, the permissive Act of Parliament, which meant an Act to enable all persons to agree if they could out of the Bishop Auckland Railway, but the undertaking was dependent on the completion of other great works, until which time the plan, this line could not have been effective if finished—he alluded to the Glasgow and Manchester Lines. As to the engineering difficulties, it had been enormous, only a few yards, at all events, not so much as the old quarter of a mile, was the railway laid on the natural level. It was said to be one continued system of cutting and embankment of the most serious character of the undertaking, that perseverance would alone complete the work, he little calculated on the trials which would be developed in the through. He then alluded to the whole district abounding in iron, coal, lead or agricultural land of the line, so long extended for agricultural purposes and the famous Featherby lime, which was drunk with enthusiasm and assented by proposing the toast, which was drunk with enthusiasm and assented by proposing the toast, which was drunk with enthusiasm.

He next proposed "Continued Success to the Old East Loosenshire Line." and stated, that without the Stockton and Darlington Railway," and stated, that without the Stockton and Darlington Railway, could never have come into existence.—Mr. Fosse returned thanks, alluding to the mineral riches of Durham—the wide and broad lands in her valleys teeming with richness fertility, and numerous flocks and herds upon the hills, and an extent system of railways, enabling them now to show their own produce in markets they never reached before.

Mr. Frew, in returning thanks to the trust, " Success to the Customers of Bishop Auckland and Wearsdale," stated, in connection with the Stockton and Darlington Railway, that, at the first meeting for its establishment, a resolution was made as to the extent of the shipment of coal which the railway would create, and 10,000 tons a year were estimated as the greatest quantity that could be shipped from the Tons, and 100 waggons were considered sufficient to carry coal from the Auckland Valley to Darlington and Stockton, while at present 2000 waggons were required for the purpose. Much coal had also been sent abroad, farmers paying high rents for land, and that railways would prevent the use of horses, and an hay would be said, by Mr. Frew, a few days since would come hay for their collection, and not a bit could be a fire in the district, while not a single field had been taken out of grass, and the greatest work there had been carried southward, by the Great North of England line, and omnibus. Railway communication had also increased the price of fuel in Yorkshire from 12s. to 17s. 6d. per ton to from 12s. 6d. to 15s. 6d., and the chairman stated that Crum, which six years since was a small village, unpopulated, almost a deserted hamlet, had now become a populous village, surrounded with well-built habitations and shops, and possessing all the various kinds of active life.—After a variety of toasts, principally success to the various local undertakings and districts, but none drank, the company separated, and the meeting closed with the noticed and liberal proceedings of the directors.

HARROWGATE AND KNARESBOROUGH RAILWAY TO BOLTON PERCY.
—A successful industrial practice of the above towns, Tinsdale, &c., have started
a proposal for a line from Harrogate by Knaresborough, to join the York
and North Midland line at Bolton Percy—a distance of sixteen miles—which
will form a direct communication by the North Midland at Knaresborough,
and thence all parts of the north and west of England, it is believed that
no day and night a conversation will induce great numbers to visit Harro-
gate in the season, instead of going to Brighton, Harrogate, &c.; the beauty of
the isolated mineral waters would be one inducement, while the beauty of the
surrounding country, and the delightful drive to Studley Park, Fountains
Abbey, Bolton Abbey and grounds, Harefield, Brimham and Plumpton Rocks,
Abby, Busdon Abbey and grounds, Harefield, Brimham and Plumpton Rocks,
York Minster, Harwood House, Centre Howard, Ripley Castle, and other
fine houses, would bring a host of visitors who, without the rapid conve-
nience of a railway, could not spare time to visit this interesting neighbor-
hood. Mr. Joseph Locke, the celebrated railway engineer, has surveyed the
country, and made an estimate of the expense, which he calculates at £1,000,000.
He considers it as an engineering point of view, and with the excep-
tion of 8 miles and a change of the Harrogate terminus, with a rise of 1 in
100, the gradient are all of an easy and unimportant character. A length
of 16,000 ft., therefore, considered simply sufficient, to be raised to the
height of 16,000 ft., and no narrow, mentioned on the most moderate data, is
shown of the track, and no narrow, mentioned on the most moderate data, is
expended, which will pay at least 1% per cent. for the capital borrowed. The
provision of the line proposed by Mr. Locke, after leaving the station, midway
between Harrogate and Knaresborough, is by the south side of the Crummock
valley to Busdon Woods, near Spillforth, thence which goes to George's Hill
Drumthorpe, proceeding to Wetherby station on a level, it then passes under the
York branch and to Walton and Whifflet, and proceeds in a straight line to
Tinsdale, and from the latter place by the village of Ouse, will lead into the
York and North Midland line at Bolton Percy.

[illegible]

There is nothing more. — We understand that a paper, "The Mr. C. W. Williams' Reminiscences of General Sherman," will be read at the meeting of the society of 18th on Wednesday next, and which, we have no doubt, will lead to some interesting discussion.

GODSON'S PATENT FORMERLY ... **has been awarded on devices the last six months**

A very interesting experiment has been carried on during the last six months at the steam engine manufactory at this extensive dockyard, with the view of testing the value and efficiency of a smoke preventing apparatus, known under the designation of Godson's patent furnace, and the result has proved so highly satisfactory, as to induce a belief that its general introduction would greatly improve the health of towns, especially those where large furnaces are constantly in operation for manufacturing or other purposes. It is evident to the most casual observers, that the dense masses of smoke seen issuing from the chimneys of furnaces and the funnels of steam-vessels when fresh coals are thrown on the fire, is composed almost entirely of cinders in a combustible state, carried into the upper atmosphere by the draught of air required to assist combustion; and in calm weather, the oxygen inhaled by the inhabitants of towns, or near manufactories where large fires are constantly kept, is charged to a great extent with these floating particles in their descent to the earth, which must impede the healthful operations of the lungs when accumulated in the organs of respiration. The inventor of a means of abridging this great nuisance of large towns and manufacturing establishments, deserves that his discovery should be made known for the benefit of the public, even were its introduction attended with additional expense, which is and the case, as the saving in fuel being 100 per cent., compared with the common furnace, in a short period far more than counterbalances the cost of the original application of the apparatus, which appears to be simple and effective, and more durable than any other having the same objects in view.

Mr. Lloyd (chief engineer of the Woolwich Dockyard), on the 2nd June, 1843, reported to Sir Francis Collier (captain superintendent), on this invention, that nearly the whole of the smoke is consumed, and that during the day that nearly the slightest appearance of smoke; and on the 9th of September, there is sent a memorandum, directing him to state whether he had any further observations to make upon Mr. Godson's smoke consuming apparatus, returned the following answer:—"I beg to state that the apparatus continues to answer, as far as regards the prevention of smoke and the generation of a sufficient supply of steam, even when the engine is fully loaded, and if the apparatus should prove durable, I see no reason why it may not be applied to land boilers, wherever it is considered a matter of importance to be without smoke." "The engine used in the factory at Woolwich is of 20-horse power, and there is a cleanliness and absence of dust in the furnace-room, which renders it quite comfortable; and were the ingenuity of the patents applied, he might introduce his invention to every description of grates for dwelling-houses, and instead of servants having to throw coal on the fire during the day, a sufficient quantity might be laid on in the morning for the day's consumption, and after the first ignition, no further smoke would be visible, but a constant bright fire be kept, and the danger of fire from fuel falling, and a constant bright fire be kept, and the danger of fire from fuel falling, and a constant bright fire be kept, and thereby confer a great public benefit."

MR. BUDDER Also has forwarded us with a communi-

Mr. Edward Smith, of Peatmo Colliery, has favoured us with a communication in reply to a letter signed "A. B.," which appeared in a recent Number of the *Mining Journal*. "A. B." finds, as the "result" of the late Mr. Buddie's "improvements" in mining, little else than "a vast amount of fatherless children and widowed wives." Our correspondent is indignant at this "cruel" comment on the career of the deceased, and characterises it as no less false than unfeeling. He and his father together were engaged upon less than half a century with Mr. Buddie and his father, and he claims to be a more competent judge than "A. B." from professional knowledge and opportunities of observation, of the merits of the deceased. "I am more thoroughly acquainted (says Mr. Smith) with Mr. Buddie's improved method of working and ventilating coal mines than 'A. B.' or his informer can be. The first consists in working the coal by districts; which method, in point of economy and dispatch, in obtaining the greatest quantity of coal in the best state of perfection, is unquestionably superior to any other than has yet been discovered. The second is the system of compound ventilation, with the use of the dumb furnace draft; and I am fully satisfied, after many years' practice, that if every officer on the colliery, supreme and subordinate, were prepared, that if every officer on the colliery, carried out Mr. Buddie's intention properly acquainted with this system, and the use of the Dumb lamp when necessary, so their full extent, with a judicious use of the Davy gas when necessary, no serious accident would ever happen from inflammable gas." It is when Mr. Buddie's plans are departed from (says Mr. Smith) that accidents occur [and to cast upon him the responsibility and the blame, would be as fair and honest as to condemn the inventor of the locomotive-engine, whose collisions or other railway calamities took place, through the ignorance or negligence of engineers]. Then, referring to "A. B.'s" remarks on the explosion at Wall's End in 1827, our contributor observes:—"Mr. Reay and I [Mr. R. is still Knight at Wall's End Colliery] were the first to descend into the Burnham Road, intending to brave the effects of the after-damp, and try, if possible, to rescue some of our fellow-men from their perilous situation. I was down to reach seven times before we could get any other party to volunteer their services, to assist us in the dangerous undertaking; and though greatly exhausted, I succeeded in bringing the first man to bank. As I am so fully acquainted with all the circumstances connected with that dreadful accident, among fifty-two human beings were so radically hurried into eternity, I would exonerate Mr. Buddie from all blame, and say that it is my belief that it originated (not from want of sufficient air in the shaft, nor from imperfect ventilation), but entirely from the culpability of the furnace-keeper, in secretly leaving the furnace, and going to a boat, where he spent the night in rioting and drunkenness. For want of the fire being kept up, to produce rarefaction, and hence a healthy current of air, there was a comparative stagnation in the underground workings, which terminated in the disaster in question. This fact came out, and was only fully established, after the inquiry. But, I have no doubt, the individual, for such criminal neglect, would have been brought to justice, and visited with the punishment due to his conduct. Had it not been for the unjust and unfeeling observations made by the author of the letter in the *Mining Journal*, the fact, for me, should have been buried in oblivion." Mr. Smith, whose letter we are unable to give in full, concludes with a warm eulogium on the deceased, and an expression of his determination, to deface his memory from malignant calumnies.

Mineral Observer.

THE BIOCUS LAMP.—The clear and mellow light which is attained by the use of this burner with so much economy, is rapidly making its way in public estimation, and not only so a number of public buildings of all descriptions now fit with it, but the private orders which are pouring in from all parts of the kingdom, show that a knowledge of its superior brilliancy at less cost, is spreading rapidly throughout the kingdom. During the late war sales at the Hall of Commerce, many of the worthy agriculturists who were present, had been heard expressing their surprise whence the light was obtained in the large room which contains only three burners. The large room at the London Coliseum, Longacre-hill, is now lit and ventilated on the Biocus principle, and has given the most complete satisfaction to Mr. Lawrence and his guests; during a dinner when the room was crowded, it remained only sufficiently warm to be desirable. The large room of the Society of Arts, Adelphi, is now illuminated by one burner only, being from the centre in a handsome chandelier, and diffuses a mellow light in every corner of the apartment, showing the splendid paintings and other works of art to great advantage. The following buildings have also lately been fitted with the Biocus lights;—viz., St. Mary's Church, Old Kent-road, Croydon; the London Dock; and the Liverpool, the Dumbelleries, the Union Lublow, the Taverners, and the Phoenix Gas Companies are patronising and recommending this burner in the utmost of their power.

PLYMOUTH, DEVONPORT, AND KESTER RAILWAY.—The Directors of this undertaking are proceeding with a degree of activity which betokens that they are confident of a successful result. The survey is now completed, and the exact routes to Parliament have been prepared. A large number of shares have been subscribed for in this neighbourhood: J. Bowers, Esq., late one of the Parliamentary representatives for Plymouth, has taken 100 shares. Considering as this is, still much remains to be done, and we trust that very rapidly of these towns, interested in their prosperity, will become shareholders. Various an aggregate of about 1000 shares. The engineers, we hear, have laid upon the line a railway will be laid. The engineers, we hear, have laid upon the line to the west of Devonport, place as the site of the terminus. Power is sought to extend the line to Mill-Tra, also to Truro, and, by means of the Dartmouth Railway, and to make a road from Mouse town to the terminus at Eldon. *West of England Correspondent.*

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W. WILLIAMS, the Director, said he had no

Major donated much space of various kinds to a full range of...

Having devoted much space at various times to a notice of the powers of this machine, we readily avail ourselves of the following additional particulars, extracted from the last Number of the *Journal of the Franklin Institute*, of Pennsylvania—a scientific publication of much repute on the other side of the Atlantic, and to which we are frequently indebted for matters of considerable interest to our readers—

and Harrison, engineers and machinists of this place, to view three well constructed steam excavators, which these gentlemen have just completed for the Empress of Russia, and are about to ship for that country, to be there employed upon the extensive railways about to be commenced, the writer collected a little information relative to them, which may, possibly, interest some of the readers of this journal. These steam excavators, as devised by the late ingenious Mr. Otis, are really high efforts of inventive talent, and will do credit to American ingenuity wherever they are seen and used. But seven of these machines have yet been built, the whole of which, excepting the first, having been made by Messrs. Eastwick and Harrison; the first was partially completed at various workshops, under the direction of the inventor, Mr. Otis, in person; but finding some difficulty in organizing and fitting up so complicated a machine, by this method of proceeding, he, fortunately, placed it in the hands of Messrs. Eastwick and Harrison, who skillfully perfected the details, and gave each good proportions to the several parts, so that all the machines constructed, including the experimental one, have proved, in practice, to be completely successful, though it has been deemed advisable to give augmented strength to those recently built.

The present price of these machines in Philadelphia is \$2000 each, but in consequence of the patterns being now on hand, and of the complete system introduced by these excellent mechanics, into the manufacture of this new machine, it seems probable that Messrs. Eastwick and Harrison may hereafter be able to furnish them even at lower rates.

[illegible]

It will be borne in mind, that the "Yankee Dredging" merely does the digging and hauling, or the getting and filling—the transportation, dumping, trimming, etc., remaining the same as though the men had been loading by the labor of men, in the usual manner. In heavy excavations of earth, where a large number of men have been employed, the work was often observed, that the work of hands rarely averaged more than 125 cubic yards, loaded into a cart per day, per man—the earth being previously loosened by the pick or plough. Now, taking the wages of men at \$1.00 per day, including all charges, and putting the loosening at the moderate estimate of 1 cubic yard cubic yard, the actual cost of digging and loosening, in an average case of heavy earthwork, would be about 8 cents per cubic yard. We will now, from the best information before us, frame an estimate of the probable cost of excavating and loading ordinary earth in heavy cuts, by the aid of the "Yankee Dredging."

[illegible][illegible]

Mainway Tunnel and others was made to the Board of Company, during the last session of Parliament, of the Account of Money lent and paid annually by each railroad company, under the head of Debt to Government, under No. 1 to the 31st January, 1845. The account of the Mainway Tunnel for the year 1844, in which the only amounts stated are account to the London and Manchester Railway, £511, and the Locomotive and Wagon-ways, £21, 10s. 10d. The total amount paid by the railway companies for the year, up to the 31st January, 1845, was £12,000, £1s. 3d. In this account the six largest sums were contributed by the following

Category	Value	Unit
Food and Beverages	10.00	100
Alcohol	10.00	100
Gasoline	10.00	100
Insurance	10.00	100
Medical	10.00	100
Utilities	10.00	100
Transportation	10.00	100
Entertainment	10.00	100
Gifts	10.00	100
Charitable	10.00	100
Other	10.00	100

(*) The Great Western includes the Cheltenham and Great Western, and Bristol and Exeter. The Great Western includes (London and Cheltenham, the Cheltenham and Exeter is merged into the Great Western.)

Persons, containing false information to assist the Government in its efforts to provide the Commission of the Court with such information by means of a letter of introduction or otherwise, may be fined at the office, or at the office, or at the office.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING

NEWSPAPER STAMP RETURNS AND ADVERTISEMENT DUTY.
(From the Railway Magazine.)

WATSON'S PATENT DRAINING, for LAND, VIADUCTS.

The drawing of fannels, crumplemounts, &c., by this patent, consists, for the most part, in inserting, to the requisite depth in any direction, and at suitable distances,

ings are now easily and by a machine, where, formerly, they were done with expensive, slow tools brought to such perfection as to render boring through the hardest brickwork a safe and expeditious operation. This machine, working the patent cutter, has, in boring a 4-inch hole through a brick wall of the hardest description, performed six feet in an hour. It is worked by manual labor, and moves in any direction, and is

NOTICES TO CORRESPONDENTS.
The Mining Journal is regularly published about Ten o'clock on Saturday after-

paper will be found particularly valuable (the paper will be laid underneath the boards, and commensurate with the boards, and may be laid down at scarcely any expense, being merely embedded in the concrete; by the foundation being thus drained, the surface will be kept cleaner and drier, and when dry and clean, this

LONDON AND BRIGHTON RAILWAY.—The communication of "A Shareholder," with copy of letter addressed to the proprietors, but which, we understood, was not read at the meeting, shall appear next week, when we may have occasion to offer

The Builder.—We are at all times averse to express ourselves disparagingly of the efforts made by new aspirants to public favour in the useful sphere of acoustical or mechanical journalism, but rather, as we have often proved, would more readily

and a helping hand in their progress to general appreciation and success; but of the numerous instances of plagiarism constantly brought under our notice, we have rarely met with one so barefaced as the transference of our description of Mr. Andrew Smith's most ingenious and valuable New Steam Generator into this

publication of last week - *harshness*, too, as it was, by the most prominent line in their weekly placard. We thought well, and still do, of the objects of the publication, and of the general nature of its contents, but must earnestly advise the producers to abstain from so reckless a course of unacknowledged compilation as that which is too evident in their last week's publication.

More extensive premises than those lately occupied being found necessary, the establishment of the *Mining Journal* is REMOVED TO 26, FLEET-STREET

THE MINING JOURNAL.

THE LIVING ECONOMIST,
Railway and Commercial Gazette.

LONDON, NOVEMBER 18, 1843.

Our readers will doubtless learn with equal surprise as our

Our readers will, doubtless, learn with equal surprise as ourselves—on the communication being made to them—that an action has been commenced by CHRISTOPHER BRAMWELL, Esq. (chair-

man of the board of directors of the Durham and Sunderland Railway Company), for an alleged libel which appeared in our columns of Oct. 7, - no case having been proved without any previous int-

Oct. 7.—process having been served without any previous intimation, or the exercise of those courtesies we should have expected from a gentleman moving in the sphere which it is to be assumed

is that of the plaintiff. It is too early a stage for us to enter on the merits of the question, or to indulge in any remarks which may appertain to the subject; which, indeed, we are induced to hope may

be rendered unnecessary by the withdrawal of the proceedings already instituted—but should such not take place, we have reason to believe that we shall be in a position to maintain the justice of our

We cannot but regret that the board of directors should have been so ill advised by the solicitors to the company (Messrs. GRAY,

ION and TIPLADY, as to have commenced proceedings against the MINING JOURNAL, for giving insertion to a record of the charges preferred against them, and thus subject the company to the cost.

law expenses—which latter may, however, involve a question. It is sufficient for our purpose, on the present occasion, to state that the information we conveyed was, in fact, a condensed report of the

proceedings of the company, collated from other published sources, and that any expression which fell from us was that of hope that the directors were not only capable, but would, reply to the charges

which had been publicly made, and thus maintain their reputation as men of honour and of character. We still think this would have been the more proper course than that of applying the funds of the

company to an attempt to suppress a fair report of proceedings, while their object should have been to court inquiry where even suspicion lurked. It is not sufficient that men standing in the position they

we should be pure—they should be above suspicion; and we believe our readers will generally agree with us, that the most conclusive manner of proving innocence is not by a prosecution.

It is only right we should state that the directors of the company addressed us a letter, received on the 13th inst., requesting, to save personal inconvenience, that we would, within thirty-six hours, furnish to their bodies some of the names of our contributors.

percent. A letter, by return of post, addressed to the plaintiff, was written (to which no reply has as yet come to hand), stating, that the subscribers of the Magazine, having at no time at all times, made the

...and the minutes of the meetings of the board of directors, were at all times open to the inspection of any shareholder, and to such explanations as might be considered necessary, and proffering them to the board of directors.

whether such work is available on, or that the proceedings will be carried on, remains yet to be seen. It is, however, gratifying to find that the attention of the press has been drawn to the subject, and we wish someone give the following extract from our sentences:

British and German Banners.—We learn that large processions were commenced a few days ago, by Germans, Russians and Poles, at the walls of Chio-

Robert Brownell, Esq., chairman of the Durham and Sunderland Railway, against the Editor of the *Mining Journal*, for an alleged libel, conducted in an article published in their newspaper on the 7th October last, concerning the disbursements made at the late annual meeting of the Durham and Sunderland Railway Co.

It is said that a communication whatever was given to Mr. England before the proceedings were taken against him, and if so, there can be little doubt but the law before us is based on facts and is just. A statute against the Indians, and all honest parties of the peace will never reduce the blame of highway robbery

...and it is an interesting way to go to see to get the price, when every respectable dealer is at an auction to sell rather than buy in his statements as he will say he. A explanation of the matter in English would have been far more effective, and, in the end, far more advantageous to the railway company.

We deem it unnecessary to add more on the present occasion, but to express a hope that our correspondents in the north, as well as the churches generally, will, in case of need, furnish us with

information in our power—and, further, that the directors will be satisfied with the selection that they have made, and not subject to propinquity of the *Railway Times*, the *Type Mercury*, and other

one contemporary, who, with the desire of giving publicity to information of a similar nature, may also have subjected themselves to a prosecution, and thus avoid the cost and trouble attendant

concerning evidence is supported by the articles which may have appeared in their columns. We have only again to repeat our offer of giving insertion in any letter treating on the subject, which may

...which each officer must be considered as usually acting on a universal rule, and not made for the occasion.

We suggest to find that the contemplated arrangements between the several lines of railway south of London—referred to in a list

...and, however desirable the subject, suspension exists in fact.

when has just been published of the number of stamps furnished to newspapers for the quarter ending with June last, and of the advertisement duty paid during the same period. As the latter returns is taken subject to revision, we give the following instead, as showing something like the true state of the papers:—
 AMOUNT OF ADVERTISEMENT DUTY PAID:—
 Mining Journal £43 6 0
 Railway Times 28 14 6
 Herapath's Journal 57 14 6
 Our contemporary last, for a length of time, maintained the above to be the only plan whereby the correct position of the public press can be arrived at; and we are somewhat inclined to place confidence in his judgment, and to agree with the assertion—more especially, from the fact of an error of view being acknowledged to have occurred in the last *Stump Returns* of the *Westminster Chronicle*; and aim of a considerable error having been made in the number allotted to the *Mining Journal* for the quarter ending with June last. We should have been brought the subject under notice, we have rarely met with one so short-hand as the fractional of one description of Mr. Andrew Smith's most ingenious and valuable New Steam Generator into this publication of last week—heralded, too, as it was, by the most prominent line in their weekly placard. We thought well, and still do, of the objects of the publication, and of the general nature of its contents, but most earnestly advise the contributors to abstain from so reckless a course of unacknowledged compilation as that which is too evident in their last week's publication.
 Received.—"J. V." (Gray's Inn-road). J. Murray—"W. R." (Llanidlo).
 More extensive premises than those lately occupied being found necessary, the establishment of the *Mining Journal* is REMOVED TO 26, FLEET-STREET (opposite St. Dunstan's Church).
THE MINING JOURNAL,
Railway and Commercial Gazette.
 LONDON, NOVEMBER 18, 1843.
 * * * * *
 Particulars desirous of ordering the *Mining Journal*, can do so, either direct to the office, or through any newsreader or bookseller in town or country. Notice of irregularity in its delivery are requested to be forwarded to the office, where every endeavour will be made to rectify the cause of complaint.
 Our readers will, doubtless, learn with equal surprise as ourselves—of the communication being made to them—that an action has been commenced by CHRISTOPHER BRAMWELL, Esq. (chairman of the board of directors of the Durham and Sunderland Railway Company), for an alleged libel which appeared in our columns of Oct. 7—process having been served without any previous intimation, or the exercise of those courtesies we should have expected from a gentleman moving in the sphere which it is to be assumed is that of the plaintiff. It is too early a stage for us to enter on the merits of the question, or to indulge in any remarks which may appertain to the subject; which, indeed, we are induced to hope may be rendered unnecessary by the withdrawal of the proceedings already instituted—but should such not take place, we have reason to believe that we shall be in a position to maintain the justice of our remarks, and to secure a verdict in our favour.
 We cannot but regret that the board of directors should have been so ill advised by the solicitors to the company (Messrs. GREGGON and TIFLADY) as to have commenced proceedings against the *MINING JOURNAL*, for giving insertion to a record of the charges preferred against them, and thus subject the company to the cost of law expenses—which latter may, however, involve a question. It is sufficient for our purpose, on the present occasion, to state that the information we conveyed was, in fact, a condensed report of the proceedings of the company, collated from other published sources, and that any expression which fell from us was that of hope that the directors were not only capable, but would, reply to the charges which had been publicly made, and thus maintain their reputation as men of honour and of character. We still think this would have been the more proper course than that of applying the funds of the company to an attempt to suppress a fair report of proceedings, while their object should have been to court inquiry where even suspicion lurked. It is not sufficient that men standing in the position they do should be pure—they should be above suspicion; and we believe our readers will generally agree with us, that the most conclusive manner of proving innocence is not by a prosecution.
 It is only right we should state that the solicitors of the company addressed us a letter, received on the 13th inst., requesting, to save personal inconvenience, that we would, within thirty-six hours, furnish to their London agent the names of our solicitors, to receive process. A letter, by return of post, addressed to the plaintiff, was written (in which no reply has as yet come to hand), stating, that the columns of the *MINING JOURNAL* were at all times open to the refutation of any charges made, or to such explanations as might be considered necessary, and proffering them to the board of directors. Whether such will be availed of, or that the proceedings will be carried on, remains yet to be seen. It is, however, gratifying to find that the attention of the press has been drawn to the subject; and we, with pleasure, give the following extract from our contemporary, the *Great Northern Advertiser*:—
 DURHAM AND SUNDERLAND RAILWAY.—We learn that legal proceedings were commenced, a few days ago, by Messrs. Gregg and Tiflady, at the suit of Christopher Bramwell, Esq., chairman of the Durham and Sunderland Railway, against the Editors of the *Mining Journal*, for an alleged libel, contained in an article, published in that newspaper on the 7th October last, commencing on the circumstances, along as the late general meeting of the Durham and Sunderland Railway Company. It is said that no intimation whatever was given to Mr. English before the proceedings were taken against him; and if so, there can be little doubt but the law before us as to such are his obligations. A demand against the independent and honest portion of the press will never silence the claims of railway property and law; and it is an ill advised step to go to law to gag the press, when every respectable Editor is as anxious to avoid litigation and error in his statements as to tell our lies. An explanation of the matter in dispute would have been for some persons, and to the end, for more advantage to the railway company.
 We deem it unnecessary to add more on the present occasion, but to express a hope that our correspondents in the north, as well as the shareholders generally, will, in case of need, furnish us with all information in their power—and, further, that the directors will be satisfied with the selection that they have made, and not subject the proprietors of the *Railway Times*, the *Type Mercury*, and other of our contemporaries, who, with the like desire of giving publicity to information of a similar nature, may also have subjected themselves to a prosecution, and thus avoid the cost and trouble attendant in collecting evidence in support of the articles which may have appeared in their columns. We have only again to repeat our offer of giving insertion to any letter tending on the subject, which may emanate from the chairman, the directors, or the lawyers of the company—while such offer must be considered as merely acting on a neutral rain, and not made for the occasion.
 We regret to find that the contemplated arrangements between the several lines of railway south of London—ordered to be in a former Number—were not carried out; but we have since heard that communications have subsequently been going on between the parties, and, however desirable the subject, suspicion exists in various quarters that there is an under current working. We trust, in the character of all parties concerned, as well as for the share.

holders who may thus be subjected to be "plucked," that there is no truth in the rumour. It, however, behoves all parties, and more especially the shareholders in the London and Greenwich line, to watch the proceedings, and, so far as they possess the means, to check the too rapid movements of parties, who, it is to be apprehended, are influenced by motives—not dishonest, we admit, but at the same time such as may be calculated to militate against the interests of their constituents. We shall take care to keep our readers advised as to any information which we may acquire, and in the meantime recommend them to be watchful, and, while they repose confidence, to see that such is not abused.

We cannot leave this subject without directing the attention of those shareholders in the London and Greenwich Railway who were absent at the late meeting of proprietors, to the protest and petition to the House of Commons, entered by Mr. GEORGE WALTER, who may be considered the projector of the line, and which appear in another column. We do not pretend to offer any opinion on the merits of the case, as the facts are before the public, and we believe that a conclusion has already been arrived at which admits of no doubt. We again say, that, while an amalgamation of interests is highly to be desired, care and caution, more especially on the part of the London and Greenwich shareholders, is indispensably necessary, if they would protect their rights.

We are glad to learn that the Miners' Company are progressing favourably, and that the infusion of "new blood" into its veins, by the issue of the shares which had not been previously subscribed, promises to realise the expectations of its projectors; although, we fear, that the company must be considered as not having succeeded to the full extent of its original object—that of affording protection to the working miner. That the managers had to contend with the body of smelters, and to encounter opposition in every shape, they must have been fully prepared for on the outset—this was self-apparent; indeed, the very whisper, or idea, that the miner, or mine adventurer, should be in a position to assume an independent character, was in itself sufficient to rouse the ire of the smelters, and to awaken any dormant energies they might possess beyond those displayed in protecting their own rights. Hence it was incumbent on the company not to have made the attempt until they were satisfied that they possessed the sinews of war; and this, unfortunately, they have reason to apprehend, they did not, to an extent which justified the high position they assumed—as an illustration of which, we may refer to the futile attempts to dispose of three months' make of tin by public auction—the consumers being afraid to make a bid, for reasons well understood—while the smeltmerchants stood aloof; and what was the result?—the company were obliged to sell their tin by private contract, at a depressed price of some 5l. or 6l. per ton. It was subsequently divided between certain parties—the monopoly again existed, and prices recovered—the profit made—and the Miners' Company, so far as their object in obtaining an open market for this description of mineral produce, was defeated.

It is not our intention again to go over the oft-trod ground, but we cannot, in noticing the affairs of the company, forget that its praiseworthy objects were defeated by a clique—to which we may add, that the absence of pecuniary resources on their part precluded them from maintaining the high ground they had taken in the first instance. The Miners' Company, we fear, must henceforth be considered only as one of the body of smelters, for we are not aware that any peculiar advantage is held out to the adventurer—and the shareholders will, as a matter of course, realise profits in the most legitimate manner, their neighbours being no longer rivals in the sense which such term would apply to them on the formation of the company.

We do not like too much privacy—and have only, in closing our brief observations, to remark, that more publicity to the company's proceedings would be satisfactory to the miner, whose interests they profess to have in view, while we can assure them it would secure the support of the capitalist—for we can well understand that parties taking up shares, although as an investment, are, at the same time, anxious, in case of need, of finding a market for the disposal of their interest. The directors may rely upon it that, as a public company, reports are looked forward to, which, at the same time that they afford a guide to the capitalist and the shareholder, act as a wholesome check on the administration.

It will be observed, by a brief report which appears in another column, that the ordinary half-yearly meeting of the proprietors of the British Iron Company was held yesterday, Sir G. LARSEN, president. The loss on the half-year ending 30th June was stated to be 13,457l. 18s. 5d., which, considering the state of the iron trade, must be looked upon in a favourable light, when it is considered that during such period the extent of the operations of the company included the make of 18,738 tons of pig-iron, and 12,572 tons of bars—of which 10,836 tons were sold—besides the manufacture of 35 tons of steel, and sale of upwards of 12,000 tons of coal, raised from the collieries of the company, exclusive of that used at the works. We stated in a former Number that 10,000 shares had been registered—thus enabling the directors to carry out the proposed measures; since which, we understand, a considerable number of shares have likewise been appropriated. We regret to find the re-action which has taken place in the iron trade—for which, however, we were prepared, as it was not to be expected that so sudden a rise could be maintained. We have more than once expressed our opinion that it depends on the ironmasters themselves (if they were united in action) to obtain a remunerative price to the master and workman; but we fear that body is composed of elements and interests which will preclude them from deriving those advantages which are properly theirs, without doing an injury to the community, while it would enable them to give fair wages to the collier, the ironstone getter, the furnace keeper, the smelter, and the several industrial branches connected with the manufacture of iron.

EXPERIMENTS IN COAL IN AMERICA.—A gentleman who takes a deep interest in all matters relating to the advancement of home industry, has furnished us with the following results of a series of experiments in coal, made at a large sugar refinery establishment in New England, with a cylindrical boiler, steam blowing off at 33 lbs. above atmospheric pressure:

	Lbs. of Water.
12-000 lbs. Lehigh, evaporated	101,777 per week.
12-000 lbs. Superior No. 1	105,000 "
12-000 lbs. Lehigh No. 1	107,000 "
12-000 lbs. Lehigh No. 2	102,400 "

Giving the following result:—

1 lb. Lehigh will evaporate	9 15 100
1 lb. Superior No. 1	9 16 100
1 lb. Lehigh No. 1	9 17 100
1 lb. Lehigh No. 2	9 14 100

—Thus showing a saving of more than one-half in the consumption in favour of the hard coal of this country. We do not wish for the accuracy of the several results. This shows we will say, that the information was derived from one who is acquainted with the establishment at which the experiment was made, and it was communicated to him for the purpose of aiding him in some statistical returns on the products of the country, and which are intended for the public eye.—*New York Herald.*

IRON TRADE.—MEMPHIS.—We are sorry to say that the demand for our staple commodity—iron—has fallen off materially during the past week; our blast-furnaces, forges, and mills, continue, we say, to full operation, but cannot be expected to go on long unless a re-action in trade takes place. It was fully expected, we think, that the remarkable rise which took place some six weeks ago, that the iron manufacturers would have been enabled to give their workmen a slight advance in their wages; but in this hope we have been sadly disappointed, as the present low price of iron will not justify the least advance, and it is a well-known fact, that the ironmasters are actually losing money by every ton they make.—*Memphis Journal.*

PROCEEDINGS OF PUBLIC COMPANIES.

THE BRITISH IRON COMPANY.

The half-yearly general meeting of the shareholders in this company was held yesterday, at the London Tavern, Bishopsgate-street, and was tolerably well attended. The chair was taken by Sir GEORGE LARSEN, Bart., who read the notice convening the meeting.—The minutes of the last meeting having been read, the CHAIRMAN read the following

REPORT.

The present is a half-yearly general meeting, appointed to be held by the regulations of the company. A report of the receipts and disbursements in the half year ending on the 30th of June last, and the balance-sheet of that date, both signed by two of the auditors, are laid upon the table. The proprietors generally are aware that the prices of iron continued to recede during the whole of the period to which these accounts apply—having ranged as follows:—

At Newport, from 44 12 6 per ton in January, to 41 0 per ton in June.	
London	5 10 "
Liverpool	4 12 "
Cardiff	4 0 "

—being lower than was known at any former period, and, upon an average, fully 10 per cent. below the average of the previous half-year—the result, therefore, could not be otherwise than unfavourable, but, notwithstanding the selling prices being so much lower than in the previous half-year, the loss is less, by the sum of 2600l.

The following is a brief statement of the operations of the half-year, and of their result:—

At Newport	18,738 tons.
At Newport	18,738 tons.
At Newport	18,738 tons.

Total make of pig-iron

THE MAKE AND SALE OF BARS, RAILS, AND OTHER MANUFACTURED IRON.

At Newport

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It will give increased satisfaction to those disposed to join the new company, if they find that, after the calls in it shall have been paid, it will be free from large liabilities, and from anything like that weighty debt which is hanging in fetters over the old company.—The CHAIRMAN said, in reply to the previous speaker, that it was agreed that 20,000 should be the amount of the shares of the new company. If, upon 20,000 shares, they had 10l. a share—that was two calls, making 10l.—so that the total would be 200,000l., they could provide with that for the amount of liability of the old company to Mr. Attwood, and would have a balance of 50,000l. to pay to the old company, which would go to pay off part of their debts—consequently, there could be no amount of calls limited within what would produce that 200,000l., so that if the old proprietors did not come into the company to the full extent, the public would come in to make up the 20,000 shares, which would give them the whole amount for the liabilities of the new company.—Mr. HITCHENS: Then the new company will start without debt?—The CHAIRMAN: With 10l. per share paid upon 20,000 shares, without debt altogether.

Mr. HITCHENS hoped that calls would be made, so as to be free from debt at the earliest moment possible.—The CHAIRMAN assured the hon. proprietor that it was intended to raise the 200,000l. by calls as promptly as they properly could.—Mr. BROWNE, M.P., said they had only borrowed in anticipation of the calls, for a period of time to suit the convenience of proprietors, till these calls could be received; so that when 10l. was paid on their shares, they would start perfectly clear of debt.—Mr. MADDEN asked, with reference to the calls upon the old company, if those who were called upon to subscribe could not pay, would the rest have to make up the difference?—and whether the directors had not power to compel defaulters to pay, and fix a period, so that the solvent proprietors might know the end of their liabilities?—The CHAIRMAN said, it was the opinion of counsel, and of their solicitor, that they had complete power to enforce payment; but he hoped the proprietors would be as anxious to avoid extreme measures as the directors were, in hopes that the proprietors would do what they ought, by paying up their calls as speedily as possible.—A PROPRIETOR asked how many proprietors paid up their arrears after the decision of Lord Denman?—The CHAIRMAN: A very considerable amount was paid up afterwards.—Mr. MADDEN asked as to the liability of the shareholders in the old company?—The CHAIRMAN said it would be the duty of the directors to compel every proprietor to pay his proportion of the debts of the company. They were raising money by degrees, and he had no doubt gentlemen would come forward, and honestly pay their debts.—Mr. CHAPMAN said, as one of the provisional committee, he would mention that a reason why the scrip shares in the new company were not put forward earlier, so as to be taken to a larger extent, was, a desire that the old proprietors might have the fullest opportunity of taking up those shares before they were offered to the public. For many years they had been borne down by the great depression of the iron trade; but as it was a staple commodity, it was not possible for it always to remain depressed. He remembered once speaking to one of the largest iron proprietors in the kingdom, and asking him if he did not feel extremely anxious respecting the long depression in the iron trade?—to which he replied that he had not the least anxiety, and observed that—"as well may you do without bread as do without iron." The trade must, in his opinion, come round, and when it was reconditioned how many furnaces had, for some time, been put out altogether, he thought it unquestionable. If proprietors allowed any part of this concern to be offered to the public, they would be found glad to avail themselves, more especially of those scrip shares which conveyed no liability.—Mr. HITCHENS said, before they separated, he thought a vote of thanks should be passed to their worthy chairman.—This vote having been seconded by a PROPRIETOR, was passed *unanimously*, and the meeting adjourned.

SOUTH-EASTERN RAILWAY COMPANY.

The half-yearly meeting of the proprietors of this company was held on Wednesday, at the joint station at London-bridge. The chair was taken by JONATHAN HARRIS, Esq., who requested the secretary to read the report of the directors, from which it appeared, that since July the line had been open to Folkestone, and since August two steamers had been placed by the Commercial Steam Packet Company on the station between Folkestone and Boulogne. The Folkestone viaduct is now completed, and the hotel in Folkestone Harbour will be opened during the present month. The directors recommended an application to Parliament for improving the harbour of Folkestone, and rendering it suitable for a packet station, and for the accommodation and unloading of colliers. Influential parties at Boulogne had availed themselves of the services of Mr. Collett in surveying the proposed extension to Canterbury and Margate. A supplementary account of 24,000l. 17s. 6d. had been delivered by the Brighton Company, and an unnecessary delay would protract the settlement of the differences between the companies. The directors had borrowed 200,000l. The traffic account left a balance of 12,700l. 4s. 3d.; but the directors, under present circumstances, did not propose a dividend to the meeting.—The accounts showed a balance in hand of 333,000l. 7s. 4d. on the construction account.—After the reading of the report, the CHAIRMAN entered into his various points very minutely, and a long discussion ensued on the subject of steam communication with France, and other topics.—The CHAIRMAN (in reply to a proprietor) said the subject of amalgamation could not be entertained in the present situation of the company.—Mr. W. A. WILKINSON (of the Brighton line) thought a partial amalgamation might take place in a short period.—The report was then adopted, and resolutions were passed for taking the necessary steps for improving the harbour of Folkestone, and for enabling the directors to come to an amicable settlement with the Brighton Company, in respect to their account.—A vote of thanks was passed to the chairman and directors, and the meeting separated.

THE ATMOSPHERIC RAILWAY.—The line from Kingston to Dalkey is now completed, and will be opened for public traffic about Monday, the 30th inst. IMPROVED RAILWAY CARRIAGE.—A coach is now in use on the Stockton and Darlington Railway, fitted with metal cylinders, containing compressed air, on which the coach rests, by means of pistons. The motion of the coach is fully as easy as that of the spring-mounted coaches. This is said to be the first application of the principle in coaches in this country.—*Great Northern Advertiser.*

AMERICAN RAILROAD CHURN.—Our Yankee friends are still going ahead, and that at a rapid pace. A correspondent of the *Georgia Herald* informs its readers of a novel idea to open a market for the agricultural produce of the state of Georgia. The inventor, "a native born citizen," has discovered that 4100,000 worth of butter are imported annually into Charleston and Savannah from the state of New York alone, and estimates that his native state should reap some of the profits of such a trade, he has invented a railway churn, by which the milk, which is to be placed in it but from the cow, will be converted into fine fresh butter and butter-milk on reaching its destination. This churn is in form of a tin can, and holds about forty gallons; it has a spring bottom, and a number of arms, which, by the motion of the carriage only, are in work about the milk in a most ingenious manner. When the *Georgia Herald* is completed, the distance to Charleston will be 400 miles, which he calculates working in eighteen hours, they being able to supply the good folks of Charleston with a daily supply of fresh butter and butter-milk from the fertile grazing lands of Georgia. In England butter is made from cream, but from this extraordinary Yankee process of churning milk, we should think, on its arrival, there would, indeed, be plenty of butter-milk, but a short allowance of fresh butter.

GOLD MINES.—From a Correspondent.—Russia now yields four times as much gold as all the rest of Europe, and the yearly produce of this metal (15,000,000) is sufficient to last from forty to fifty shillings. The silver needs for its conversion a quantity of from 100 to 150 shillings; the plates require but three or four; and the copper, which is also converted by heat, into motion from shillings. By far the greater part of these metals come to the aid in St. Petersburg.

YANKEE DISCOVERY.—It is said that M. Baidouin (of Vienna), has discovered a solution of sulphuric acid and ammonia solution, which has the effect of giving to articles immersed in it, the hardness of steel, without injury to their natural colour. A discovery of this kind was made many years ago by a celebrated man, but while the question of patenting the secret of him was being agitated, he died. M. Baidouin is fortunate in having rediscovered the process, for it has been the subject of study for years, on the part of many philosophers.—*Philadelphia Saturday Times.*

PAWSON'S RECORD.—Mr. A. B. Pawson delivered a course of lectures at the Westminster Geological Society, at the conclusion of which, after an elaborate review of the evidence relating to the formation of the extensive ranges of primary stratified rocks, he said, with our present knowledge of geological facts and phenomena, we should be justified in ascribing the conclusion he had pointed out, and view them on the standard of a series of successive and igneous agency; the former in ascending, secondary, and disposing their constituent materials, and the latter to act only leaving the surface, under which they were deposited, and leaving a primary series of basaltic upon the early igneous, assigned to their action, but leaving the secondary series, subsequently to their deposition, in each form, as, in some instances, to substantially alter their structure and constituent aggregation.

and commerce, thinking me greatly, and stating it was high time a stop should be put to a system in which the honest tradesman has no chance whatever, and, indeed, as I am sure I shall be, by every one who feels an interest in transacting business in a legitimate manner, I feel proud to again appear in your columns, and will continue to do so, in spite of all low level about me. I am, Sir, your obedient servant, G. A. M'DONNELL.

VALENCIA SLATE.

It is, at all times, highly gratifying to be enabled to lay before our readers any circumstances connected with the development of the mineral resources of Ireland, and we have noticed, with much pleasure, the introduction into this country of slate from the Island of Valencia, in the county of Kerry. This island is the property of the Knight of Kerry (Pittsburgh), and the quarries are leased by Bowick Blackburne, Esq.; the slate is most excellent in quality, quite equal in strength, texture, and size of slabs to the very finest of the Welsh article, and bids fair, from the facilities of transit and consequent economy in price, to cause an extraordinary influence on building generally; it leaves the quarries in a fully prepared state, sawn on both sides, and gauged to regular widths, with finished edges. The great bearing power of slate generally, as compared with other stratified bodies, is well known, and from some experiments made by order of the Board of Ordnance, it has been found that to break slabs of the like dimensions of strong paving-stone and Valencia slate, the former fractured at 2 cwt. 2 qrs. 23 lbs., while the slate bore a weight of 11 cwt. 1 qr. 25 lbs. From its non-absorbent properties, it is totally impervious to moisture, which renders it admirably adapted for basements, coolers, wine bins, oil and water cisterns, salt stores, sugar-houses, butchers' and fishmongers' stalls, slaughter-houses, &c.; while 4-inch slabs, finished in a most superior manner, have been introduced to a considerable extent for skirting, and shelves for books and papers, and a thicker description for obsequed hall pavements, where it contrasts beautifully with Portland or York stone. The Valencia slate stone has been used at the National Gallery, St. Thomas's Hospital, New Bethlem Hospital, Whitehall Chapel, Woolwich Dockyard, Bristol Custom House, St. Olave's Grammar School, East India Dock steam warehouses, and the Westminster Hospital, besides numerous other places. The quarries are in active work, and have been for some years, they are, in the common acceptance of the term, inexhaustible, and capable of being worked to any extent. Some objections were made to the first importations, being from the upper surfaces of the quarry, and, consequently, irregular in texture, as well as in appearance; these can no longer exist, as the stones are now obtained from the most perfect part of the rock, and from the very superior and efficient manner in which they are squared and dressed, and the low price at which they can be rendered, they are getting into very general demand, and we think there can be no doubt that the success which attends the exertions of the enterprising holder of the Valencia Slate Quarries, will induce many proprietors of mineral wealth in Ireland, to take measures for its development, measures which must not only produce immense benefit to the population, but which will, in most cases, when undertakings are carried on in a scientific and legitimate manner, prove a source of great profit to the proprietors.

TERRESTRIAL MAGNETISM.

An important communication was made by M. Aimé to the Paris Academy of Sciences, on the 7th inst., on terrestrial magnetism. It is known that magnetic declinations and inclinations are of two kinds—the one periodical, the other progressive; the first depend on the position of the sun, and vary with the hours and seasons. Graham was the first to notice this fact, in the year 1722, and Cassini confirmed his observations in 1783; but the first continued and complete observations on the subject are due to M. Arago, who, in 1818, ascertained that the magnetised needle, on the existence of an aurora borealis, was suddenly deranged, not only in the places where the aurora was visible, but also in countries where this was not the case. In order to throw light upon this phenomenon, M. Arago induced M. Kappeler to undertake at Kasan a series of magnetic observations in concordance with those of Paris, and from the comparison of these two series resulted the fact, that the maxima and minima of the deviation observed at Kasan corresponded with the maxima and minima at Paris at the same moment. This result once known, the attention of scientific men was roused, and observations were simultaneously made in different parts of the globe. In order to follow up these discoveries, the Academy of Sciences, on the proposition of M. Arago, charged M. Aimé to make a series of observations at Algiers, and provided him with proper instruments for the purpose. His observations commenced in June, 1841, and were continued until the end of 1842. Amongst the results stated by him to the Academy are the following:—He says there exists between the temperatures of the surface of the globe and the magnetic declinations so complete a correspondence, that he is led to infer that the variations of declination may be generally considered as the consequences of those of the temperatures of day and night, and if this mode of viewing the subject be correct, there must be found in eclipses of the sun a deviation in the normal diurnal course of the needle of declination. As to the annual variation, on comparing the observations of M. Aimé with those of Captain Biot, made in August, 1832, it is seen that it was in nine years 24 min. 26 sec., which gives per annum 2 min. 4 sec. of diminution of declination. M. Aimé found that the curves of declination varied little in winter and summer, and that it is towards the equinoxes that the most striking anomalies are manifested in the march of the magnetic needle. M. Humboldt and other scientific men having expressed an opinion that it would be important to watch carefully the magnetic variations during the periods of the falling stars, M. Aimé did not fail to attend carefully to this suggestion during the month of November, 1841, but the periodical fall of these meteors was not visible at Algiers, and if it did take place it had no action on the magnetic needle.

ON COATING IRON WITH ZINC AND COPPER.

At the Society of Arts, Adelphi, on Wednesday evening last, a paper by Mr. Pellatt, of the firm of Elkington and Co., Moorgate-street, "Upon the Various Methods of Coating Iron with Zinc and Copper," was read by Mr. Whishaw, the secretary. It commenced by noticing how essential iron was in the wants of man, and, though of such importance in the arts, it was liable to continual decay under almost any circumstances, from its great affinity for oxygen, which was of that insidious character, that, as soon as one coat of oxide was formed on the surface, continual oxidation went on beneath, until the iron was entirely decomposed. The most modern methods adopted for preserving iron—viz., painting and oiling—were noticed; both these are cheap, but not durable, and too being the negative metal, as soon as the outside came in contact with water, the tin was preserved at the expense of the iron, which gradually rotted away; this action might be noticed in almost every street in London, where iron railings were oxidized into the stone coping; the lower part of the rail, in connection with the solder, would be found to be gradually wearing away, and this was from the action of water upon the outside. After describing the history of the discovery and improvements in the mode of employing galvanic action, the paper proceeded to detail the methods now adopted for coating iron with zinc and copper. In the former case, 1 lb. of sulphate of zinc is dissolved in one gallon of water; the iron is to be well cleaned with sulphuric acid, and covered with sand; it is then to be placed in the solution, and connected to the negative end of a galvanic battery; after a time it is to be again cleaned and covered, and then returned to the solution, until it has acquired the necessary thickness of zinc. With copper the process is exactly similar, the solution being a form-cyanide of copper in a cyanide of potassium. Some conversation ensued upon the subject, and a variety of specimens on the table were inspected, on the subject of the complete covering of which, and their durability, Mr. Pellatt stated that they had covered 18-inch bolts of iron, coated with copper, to be driven into oak 24 inches thick—making, in the first place, but a small hole, so that it required great force to effect it, yet, on separating the bolt, it had been found not to have lost a particle of the coating; they had also been heated red hot, and plunged in cold water, without the slightest signs of separation. We are happy to see the increasing success of this interesting and valuable invention. Since the death of his late illustrious president, there has been no addition of, we believe, some hundreds of members, and, since the commencement of the present session (November 1st), the proportion for election has been thirty to forty, and it is highly to the credit of the vice-presidents, and the various committees, as it is to the individual secretary (Mr. Francis Whishaw), that no restrictions are placed to render the nomination of the utmost possible usefulness in the advancement of science and the arts.

MINING CORRESPONDENCE.

ENGLISH MINES.

METALLIC MINING COMPANY.

Nov. 14.—Accommodated on the mine of costs and receipts for July and August: Dr.—By wages, 1274. 10s. 10d.—Merchants' bills, 5255. 10s. 10d.—1861 10 0
By balance in partner's hand last account 4755 14 2
Copper sold August 10 and Sept. 7 4291 12 3
Deduct dues 264 10 0—4467 1 7
The profit, after 1000 13 5
Deduct dues 50 10 0—950 2 9—8272 10 6
Leaving a profit of 43614. 10s. 6d., from which deducting 40000. for a dividend declared this day, a balance is left in the partner's hands of 2614. 10s. 6d.

NORTH HOLMSTON MINING COMPANY.

Nov. 13.—Hitchins's shaft is sunk below the 100 fathom level 10 fms. 1 ft., and the ground still favourable for sinking. In the 110 fathom level, on the south side, west of Goldworthy's mine, the lode is one foot wide, and worth 20s. per fathom; on the north side, west of the mine, the lode is one foot wide, and worth 20s. per fathom; on the north side, west of the mine, the lode is one foot wide, and worth 20s. per fathom; in the 100 fathom level, west of Hitchins's shaft, the ground is favourable for driving; in the eastern stopes in the back of this level the lode is eighteen inches wide, and worth 20s. per fathom; in the western stopes the lode is twenty inches wide, and worth 20s. per fathom; in the mine sinking below this level the lode is fifteen inches wide, and worth 14s. per fathom. In the cross-cut towards the Flagstaff lode the ground is hard for driving. In the sixty fathom level, west of Hitchins's shaft, the lode is nine inches wide, composed of capel, spar, and mudstone; in the stopes east of Hitchins's shaft, in the back of this level, the lode is eighteen inches wide, and worth 20s. per fathom; west of Hitchins's shaft, the lode is one foot wide, and worth 20s. per fathom. In the cross-cut south at the eighty fathom level the ground continues favourable for driving; in the stopes in the back of this level the lode is fifteen inches wide, and worth 20s. per fathom. The pitches are looking well. T. RICHARDS.

NORTH HOLMSTON MINING COMPANY.

Nov. 9.—The water has increased in the engine-shaft, so as to prevent its being sunk any deeper at present. The wheel pit is now being walled up, and the engine work preparing as fast as possible. The lode in the adit and is now about twenty inches wide, composed of gossan, mudstone, and spar, and by the end of this week the level will be far enough west for a cross-cut to be driven, which will communicate with and unwater the shaft. T. RICHARDS.

NEEDHAM UNITED MINING COMPANY.

Nov. 13.—Wheel Marquis: The new engine-shaft is now 10 fms. 1 ft. below the thirty-five fathom level. In the thirty-five fathom level west no alteration since last report; the lode in the thirty-five fathom level east is about two and a half feet wide, and worth about 14s. per fathom. In the twenty-five fathom level east the lode is twenty inches wide, composed of gossan, spar, mudstone, and stones of ore, and promising improvement. The pitches, on the whole, are looking well. J. PHILLIPS.

CALLINGTON MINING COMPANY.

Nov. 13.—I beg to say the north engine-shaft is sunk about 9 fms. 3 ft. below the sixty; at this level driving south, the lode is six inches big, tribute ground. In the fifty south the lode is one foot big, a good course of silver-lead ore. In the forty south the lode is about six inches big, four inches of it saving work. The thirty south is unproductive. The fifty east on copper lode is about eighteen inches big, with stones of ore. Our tribute pitches are looking well. At the south mine we have forked the water within fifteen feet of bottom; the shaftmen are now engaged in cutting ground for plunger lift at the seventy. The forty north we have set to drive to six men. The sixty north will be cleared, and in order for driving in two or three days. JOSEPH T. PHILLIPS.

TRELEIGH CONSOLIDATED MINING COMPANY.

Nov. 13.—At the eighty, east of Christie, the lode is three feet wide, worth 16s. per fathom, and is a very kindly ore. At the eighty west the lode continues poor and disordered. The seventy east is two feet wide, without mineral. At the mine sinking under the seventy east the lode is two feet wide, and worth 8s. per fathom. At Good Fortune shaft, sinking under the fifty fathom level, the lode is three feet wide, and worth 12s. per fathom. At the fifty west the lode is the same as last week—the men having been employed rising against the mine from the forty-four, which is now completed; and the fifty east is eighteen inches wide, with good stones of ore. W. SYMONS.

WHYRE WHEEL JEWELL MINING ASSOCIATION.

Nov. 13.—At the eighty-five west, on Wheel Jewell lode, we have met with two limbs of cross-courses in the past week, which have disordered the lode; the ground in this level is much more favourable for ore than last reported. The fifty-seven east, on Bankingham's lode, is improved since our last visit—it is now worth 16s. per fathom. There is an alteration in any other part of the mine since our last. We shall sample this week about 350 tons of ore. S. LEAN.

CONSOLIDATED TREVIL MINING COMPANY.

Nov. 13.—The lode in the fifty fathom level, west of Henwood's shaft, is three and a half feet wide—very good tribute ground; ditto, east of Henwood's shaft, is fifteen inches wide—tribute ground. We have cut the cross-course in the forty fathom level, east of Henwood's shaft, and have suspended this end until a rise be had for ventilation; the lode in the rise, in the back of this level, east of Henwood's shaft, is six inches wide—tribute ground. The lode in the mine, sinking under the fifty fathom level, west of Henwood's shaft, is one foot wide—very good tribute ground. H. WILLIAMS. J. MORRIS.

CONSUMER MINING COMPANY.

Nov. 13.—At the seventy fathom level, driving west of Murray's engine-shaft, we are pleased to inform you that Chiverton lode is productive, being one foot wide, and yielding rich work; it has an extremely promising appearance, and we have every reason to believe that a quantity of good ground is immediately before us; at this level, driving east from Murray's shaft, we had the ground to be favourable, but the lode is at present yielding little or no lead. In the seventy fathom level east, going west of great engine shaft on Chiverton lode, we have some lead, but having now driven six fathoms since seeing the north lode, we shall at once cut north, for the purpose of again intersecting it; at this level, driving east of great engine-shaft on Chiverton lode, we are still without lead, but the lode is large, with a very kindly appearance, and in a soft conglomerate of ground; we intend removing the party of men here for about three or four weeks, to drive east from Murray's shaft, so as to enable the company to return and finish cutting the pit, and make the necessary preparations for sinking to an eighty fathom level with all possible speed. The north lode at the seventy fathom level west, at great engine-shaft, working on tribute by two parties, is making very encouraging; other pitches generally are much as usual in appearance and productivity. J. WARR. R. ROWE, Jun.

TAMAR SILVER-LEAD MINING COMPANY.

Nov. 13.—In the 135 fathom level we have cut broken any lode since our last report. In the 135 fathom level the lode is two feet wide, producing ore, but at present not rich. In the 115 fathom level the lode is eighteen inches wide, one foot of which is good work. In the 105 fathom level the lode is two feet wide, producing good work. In the ninety-five fathom level the lode is three feet big, carrying two branches of silver-lead ore. In the eighty-five fathom level the lode is from two to three feet wide, one foot of which is ore. In the seventy-five fathom level the lode is two feet wide, composed of capel, spar, and some good work for silver-lead ore. In the sixty-five fms. level the lode is two and a half feet wide, yielding ore, but not rich. In the fifty-five fathom level the lode is about one foot wide, chiefly composed of four-eyes, intersected with silver-lead ore. In the forty-five fathom level the lode is two feet wide, chiefly composed of capel, interspersed with ore. In the thirty-five fathom level the lode is one foot wide, one inch of which is good working work. The lode in the thirty fathoms below the thirty-five fathom level on the incline, and the ground continues favourable for sinking. At the south mine we are, on the whole, getting on favourably. In the thirty fathom level, driving south, the lode is one foot wide, carrying work; in the same level, driving north, the lode is poor; in the mine, sinking from the seventeen fathom level, the lode is fifteen inches wide, six inches of which is very work. At Wheel Henwood the company are proceeding on with the engine-house, but not so fast as we could wish, on account of the severe weather, and the difficulty of getting stones for building; the shaftmen from the wheel to the engine-house is completed. S. BROWN.

CHRYSTAL HILLS MINING COMPANY.

Nov. 13.—In the seventy fathom level, east of Williams's shaft, the lode is two and a half feet wide, eighteen inches ore of low quality, worth 15s. per fathom; in the seventy fathom level west the lode is four and a half feet wide, one foot good ore, worth 10s. per fathom. In the sixty fathom level, east of Williams's shaft, the lode is three and a half feet wide, one foot of ore, worth 10s. per fathom; in the sixty fathom level, west of Williams's shaft, the lode is four and a half feet wide, one foot of ore, worth 10s. per fathom; in the sixty fathom level, east of Williams's shaft, the lode is four and a half feet wide, one foot of ore, worth 10s. per fathom; in the sixty fathom level, west of Williams's shaft, the lode is four and a half feet wide, one foot of ore, worth 10s. per fathom; in the sixty fathom level, east of Williams's shaft, the lode is four and a half feet wide, one foot of ore, worth 10s. per fathom; in the sixty fathom level, west of Williams's shaft, the lode is four and a half feet wide, one foot of ore, worth 10s. per fathom; in the sixty fathom level, east of Williams's shaft, the lode is four and a half feet wide, one foot of ore, worth 10s. per fathom; in the sixty fathom level, west of Williams's shaft, the lode is four and a half feet wide, one foot of ore, worth 10s. per fathom; 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